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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/742,781	12/20/2000	Vij Rajarajan	2660	8472

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EXAMINER

KE, PENG

ART UNIT	PAPER NUMBER
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2174

DATE MAILED: 06/03/2004

9

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/742,781

Applicant(s)

RAJARAJAN ET AL.

Examiner

Peng Ke

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 March 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is responsive to communications: Amendment, filed on 3/22/04.

This action is final.

2. Claims 1-29 are pending in this application. Claims 1, 14, and 19 are independent claims.

In the Amendment, filed on 3/22/04, claim 1 was amended.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claim 1-3, 6-10, 13-25, 27, 29 are rejected under 35 U.S.C. 102(a) as being anticipated by Lyle et al. (US 5,956,023)

As per claim 1, Lyle et al. teaches in a computing device, a system comprising:

a modeling engine for editing modeling elements, the modeling engine connected to a user interface (col. 4, lines 54-64); The examiner infers to the application control manager to be a type of modeling engine.

a layout engine, the layout engine connected to the modeling engine and configured to execute an automatic layout process that automatically lays out modeling elements (col. 10, lines 3-14); The examiner infers to transmitting a prescribed function code for implementation by the application control manager to be automatically laying out modeling elements

and a set of at least one interface connecting the modeling engine to the layout engine, the set including at least one interface through which the modeling engine communicates with

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the layout engine to provide user interaction with the automatic layout process other than to cancel the automatic layout process (col. 10, lines 30-40). The examiner infers to pause/end to be an user interaction with the automatic layout process other than to cancel the automatic layout process.

As per claim 2, Lyle et al. teaches the system of claim 1 wherein the modeling engine communicates with the layout engine by calls from the layout engine via the interface (col. 12, lines 45-60).

As per claim 3, Lyle et al. teaches the system of claim 1 wherein the modeling engine communicates with the layout engine via events raised by the layout engine (col. 10, lines 41-51).

As per claim 4, Lyle et al. teaches the system of claim 1, Lyle teach wherein the modeling engine communicates with the layout engine to provide a progress indicator to the user. (Fig. 11, item 78)

As per claim 5, Lyle et al. teaches the system of claim 1 wherein the modeling engine communicates with the layout engine to obtain status information from the layout engine (col. 12, lines 61-68).

AS per claim 6, Lyle et al. teaches the system of claim 1 wherein the modeling engine communicates with the layout engine to interrupt the automatic layout process (col. 10, lines 41-51).

As per claim 7, Lyle et al. teaches the system of claim 6 wherein the modeling engine communicates with the layout engine to preserve state of the automatic layout process (col. 10, lines 41-51).

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As per claim 8, Lyle et al. teaches the system of claim 7 wherein the modeling engine communicates with the layout engine to preserve the state of the automatic layout process by passing an interface thereto (col. 10, lines 41-51, fig 4, item 86).

As per claim 9, Lyle et al. teaches the system of claim 7 wherein the modeling engine communicates with the layout engine to restore the state of the automatic layout process, and to resume the automatic layout process (col. 10, lines 41-51).

As per claim 10, Lyle et al. teaches the system of claim 9 wherein the modeling engine communicates with the layout engine to restore the state of the automatic layout process by passing an interface thereto (col. 10, lines 41-51). It is inherent that the display will include a resume button.

As per claim 13, Lyle et al. teaches the system of claim 1 wherein the modeling engine communicates with the layout engine to obtain capability information from the layout engine (fig. 9, item 102)

As per claim 14, Lyle et al. teaches a computer-implemented method, comprising:
starting a layout engine to lay out model elements(Fig 5, item 98);
receiving information from the layout engine indicating that it can be safely interrupted;
and interrupting the layout engine based on the information (Fig 9. item 86).

As per claim 15, Lyle et al. teaches the method of claim 14 wherein receiving information comprises receiving an event (Fig 9. item 86); It is inherent that the pause/end would be available only when the user have the permission to pause the process.

As per claim 16, Lyle et al. teaches the method of claim 14 further comprising, receiving a request to interrupt the layout engine, and waiting for the information from the layout engine

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indicating that it can be safely interrupted (Fig 5, item 98, Fig 9, item 86); It is inherent that the pause/end would be available only when it is save to interrupt.

As per claim 17, Lyle et al. teaches the method of claim 14 wherein the request comprises a user action (Fig 9. item 86).

As per claim 18, Lyle et al. teaches a computer computer-readable medium having computer executable instructions for performing the method of claim 14 (col. 19, lines 62-64).

As per claim 19, Lyle et al. teaches a computer-implemented method, comprising:
starting a layout engine to lay out model elements (col. 10, lines 3-14). The examiner infers to transmitting a prescribed function code for implementation by the application control manager to be automatically lays out modeling elements;

providing information to the layout engine by which the layout engine preserves state information (col. 4, lines 54-64);

interrupting the layout engine (col. 10, lines 3-14);

providing information to the layout engine by which the layout engine restores state from the state information (col. 10, lines 3-14); It is inherent that when the user resume the process, the layout engine provides the user with the state information by switching the resume button back to the pause/end button; and

restarting the layout engine from the restored state (col. 10, lines 3-14).

As per claim 20, Lyle et al. teaches the method of claim 19 wherein starting the layout engine includes communicating information to the layout engine through an interface thereof (col. 10, lines 4-14).

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As per claim 21, Lyle et al. teaches the method of claim 19 wherein providing information to the layout engine by which the layout engine preserves state information includes passing an interface to the layout engine (col. 10, lines 41-51). It is inherent that the resume button indicates to the user that the system is in a preserved state, which can be resumed.

As per claim 22, Lyle et al. teaches the method of claim 19 wherein interrupting the layout engine includes communicating information to the layout engine through an interface thereof (col. 10, lines 41-51, fig 4, item 86).

As per claim 23, which is dependent on claim 22, it is of the same scope as claim 15. (see rejection above).

As per claim 24, Lyle et al. teaches the method of claim 19 wherein providing information to the layout engine by which the layout engine restores state information includes passing an interface to the layout engine (col. 10, lines 41-51). It is inherent that when the process is resumed, the button is returned to the pause/end state, which indicate to the user that the process is being executed.

As per claim 25, Lyle et al. teaches the method of claim 19 further comprising, receiving events from the layout engine (col. 10, lines 14-18).

As per claim 26, which is dependent on claim 25, it is of the same scope as claim 4 (see rejection above).

As per claim 27, Lyle et al. teaches the method of claim 19 further comprising, calling the layout engine to receive status information therefrom (col. 12, lines 61-68).

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As per claim 29, Lyle et al. teaches a computer computer-readable medium having computer executable instructions for performing the method of claim 19 (col. 9, lines 24-28).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lyle (US 5,956,023) in view of Hurtado et al. (US 6,418,421).

As per claim 28, Lyle et al. teaches the method of claim 19. However, he fails to teach wherein the status information includes data corresponding to time remaining to complete laying out the model elements. Hurtado et al. teach a method wherein the status information includes data corresponding to time remaining to complete laying out the model elements (col. 56, lines 20-35.). It would have been obvious to an artisan at the time of the invention to include Hurtado's teaching with Lyle et al.'s engine in order to allow the users to utilize their time more efficiently.

Claims 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lyle (US 5,956,023) in view of Wittenburg et al. (US 6,515,656).

As per claim 11, Lyle et al. teaches the system of claim 1. However, Lyle et al. fail to teach the system wherein the layout engine comprises a pluggable software component. Wittenburg teaches usage and implementation of pluggable software (col. 7, lines 14-34). It

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would have been obvious to an artisan at the time of the invention to include Wittenburg's teaching with Lyle et al.'s engine in order to allow user to add components that are independent of other components.

As per claim 12, Lyle et al. and Wittenburg teach the system of claim 1. Wittenburg further teaches wherein the modeling engine comprises a pluggable software component (col. 7, lines 14-34).

Response to Argument

Applicant's arguments filed on 3/25/04 have been fully considered but they are not persuasive.

Applicant's arguments focused on the following points:

A) Lyle fails to recite an engine that is designed to perform resource-intensive tasks such as emulating (modeling) microelectronic system designs where model elements behave and interact with each as though they were real as defined by the parameters stored in the modeling engine.

A) In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., an engine that is designed to perform resource-intensive tasks such as emulating (modeling) microelectronic system designs where model elements behave and interact with each as though they were real as defined by the parameters stored in the modeling engine) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

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THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peng Ke whose telephone number is (703) 305-7615. The examiner can normally be reached on M-Th and Alternate Fridays 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kristine L Kincaid can be reached on (703) 308-0640. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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